In the work task solutions mynymyzatsyy intensity of horizontal Changed in nahruzok element metallo constructions tap Start ego in the process. Postavlennaya problem solutions with pomoshchju method varyatsyonnoho yschyslenyya. Result of the work proyllyustryrovanы graphics, tap Start harakteryzuyuschye process with mynymalnoy yntensyvnostyu Dynamic Changes of horizontal loads.

Kradistrict, cart, Dynamic load, dynamycheskaya model Present Massa, beam crane, optimization.

The paper solved problem of minimizing intensity change of horizontal loads in metal elements of crane during its start-up. Tasked solved by method of calculus of variations. The work illustrated with diagrams, describing process of launching crane with minimal change in intensity of horizontal dynamic loads.

Crane, trolley, dynamic loading, dynamic model, reduced weight, beam crane, optimization.

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Information and communication TECHNology in teaching technical subjects in EDUCATIONAL INSTITUTIONS I-II OF ACCREDITATION

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Fulfilltion analysis software teaching tools used in agricultural education. We consider information and communication tractor-driver training in agricultural production.

Information and communication technologies, programmable didactic materials, profession, tractor-driver curriculum.

Resolutionska problem. Deepand and dynamic changes occurring in agricultural economics, intellectualization of labor, the development of computer technology and information and communication technologies, development of market relations lead to the urgent need for training future agrarian accordance with

Informatization agriculture. Professional career in the agricultural sector at present impossible without the use of modern means of electronic communication software for planning, accounting and analysis of financial and economic activity of agricultural production, data market, regulatory, prognostic, technological and economic information. Equally it and skilled workers agricultural sector, including tractor-drivers of agricultural production.

AnaLiz recent research. Andstitutionalism scientific papers shows pravailability of theoretical and practical research on the problems of information agrarian training specialists, among which stand out: the process of informatization agricultural sector (M. Kropyvko [5] D. Melnychuk [8] M. Shvydenko [14] and others) ; Guidance for informational training (I. Bulakh [1] A. Verlan, L. Tverezovska [2] A. Gurzhiy [3] V.Klochko [4] A. Kuznetsov [6] Y. Mashbits [7] H. Morse [9] B. Sumy [12] and others).

Metand research - Consideration of didactic software tools that Usebuilt into agricultural education, training and information analysis tractor-drivers of agricultural production.

Rezultaty dperssurvey findings Aboutbrought into Providetion course information technology supports and promotes the development of information, management and training systems of agriculture universities, including facilities for design, implementation, maintenance, use of such systems targeted at students, teachers, other agricultural items, facility staff [10].

In the field of logistics education information technology helps to economically justify the choice of means to implement the educational process agricultural educational institutions; determine the parameters of standard equipment cabinets informatics courses or integrated with it; explore ways to effectively use tools and original serial program development oriented SAO.

H. Morse stresses [9], which is the use of modern computer technology in the educational process does not provide andvtomatychnoho solve his problem of information. To create conditions for maximum efficiency of information technology course, necessary to substantiate and create his system of psychological and pedagogical support.

Andnformatsiyni as educational technology in the agricultural sector institution and its system software, technical,

teaching and organizational support create a good environment for widespread use of Internet technology and Web-based technologies, development of centralized agricultural data bases and Web-sites, the implementation of the latest advances in the field of distance education, the implementation of remote interactive advisory services in agriculture, creating a national computer cybernetic information system that serves the agricultural sector. The course information technology is a factor in the development of training and educational programs and control of workstations, creation of an information management system of agriculture universities, virtual information space in the educational institution where future Agrarians will be given the ability to quickly find the desired educational, technological, economic or market information. That educational information technology in the agricultural school as a guarantor of information system of agricultural education, and the entire agricultural sector.

Uselast one program teaching tools in the learning process can solve these methodological problems: 1) differentiation and individualization of the learning process (eg,
raexpense possibility of gradual progress towards the goal lines of varying difficulty); 2) control with feedback to the diagnosis of errors (false statement of reasons for action student demonstration on the computer screen comments relevant) the results of training (training activities) and evaluation of the results of training activities; 3) exercise self-control and
self-correction; 4) organization of training in the process of learning
educational material and self students; 5) Release of training time by running on a computer labor-intensive computations and activities related to numerical analysis; 6) computer visualization of educational information: first investigated object (visual representation on-screen computer object, their parts or their models, and if necessary - at various angles, in detail, with the ability to display internal interconnection ' bonds components); secondly studied process (a visual representation on the screen of a computer or its process model, including hidden in the real world, and if necessary - in development at the time and spatial movement, presenting graphic interpretation of the study investigated patterns of process); 7) modeling and simulation of the objects, processes or phenomena; 8) laboratory works in the computer program simulating real experiment or experiment; 9) create and use databases

data needed in training activities, and access to the information; 10) enhance learning motivation (for example, by means of inventive program implementation game situations); 11) armament strategy student learning; 12) the development of a certain type of thinking (eg naochno- imaginative, theoretical); 13) forming the ability to make better decisions or variational solution in a difficult situation;
14) shapeculture of learning activities, information culture teacher and student (for example, through the use of word processing systems, spreadsheets, databases
data or integrated software package user).

In summary, we note that most of the feasibility of new information technologies in agricultural education [13], including software, determined features
their use as educational information visualization tools, means of formalization of knowledge about the field of agriculture, tool measurement,
reflect and influence events, objects, processes agricultural sector.

By E. Skibitskym [11], when using software tools teacher teaching agricultural education institution shall perform the following functions: a) the selection and arrangement of theoretical material Agricultural Sciences, preparation of practical tasks AIC; b) identify errors in the responses of students, selection methods and error correction method for a particular student; c) perform analytical work to identify common difficulties for all students, to change teaching methods, curricula, teaching correction software products; d) the organization of the learning process using didactic software tools, tracing its
dynamics; d) selection criteria for the evaluation of agrarian uchniv-; e) determining the appropriateness, space and functionality specific teaching tools in the educational process of agriculture universities, their applicability to a particular contingent of students, as well as various regional agro-climatic conditions with respect to their characteristics; g) the development of integrated computer courses; h) the constant updating of theoretical and practical material; c) ensure sustainable operation of computer training systems.

The most challenging aspect of teaching software means there is a connection between the student and the computer. At this stage, the student, on the one hand, the impact on the system, deciding on further work, on the other hand - he is the object of control. Teacher
communication between them is as follows. If the student correctly solved the problem, the task simulated agricultural production, or during the presentation of theoretical material

wrong answer to a question, the computer begins to error statistics, which connects to the analysis of three components: parser error (error detection); collect statistics on error (fixing places systematically mistaken ratio); choice of corrective program to help the student and summarizing statistical calculations (logical unit).

Depending on the level of revealed knowledge and degree of repetition of similar errors computer gives advice, which states that it is correct or student must take into account in this
simulated situation agricultural production. In the most difficult situations the computer sends a student to the teacher for advice. In addition, the student may be granted a certain background information needed for analysis and correction results. The degree sweep of the information capacity
Sectionidkazky determined by the result of earlier work and employment goals.

A student at any stage can choose the difficulty level tasks and methods of presentation of educational material object. In addition, the nature of the assistance provided by the student, learning objectives defined, the level of preparation,
aboutsoblyvostyamy study certain subjects. The general principle is: the student is not given new information until he learns the previous material.

Depending on the used components are formed various software tools didactic agrarian, characterized by its subject part, hardware and software
Providennyam. If technical and software
Opiyentovane to use various types of equipment, it is possible to create an integrated learning system, such as multimedia. If the software is based on the principles of building intelligent systems in agricultural science, it is possible to create expert systems APC.

Training curriculum tractor-driver agriculture provide the discipline the "Information Technology", themes and number of hours spent for their study are listed in Table. 1.

The first theme "Information and Computer
thathnolohiy to automate production "will deal with these issues. The concept of automated control system equipment, machine, machinery, manufacturing plant, robotehnichnym complex, flexible automated module line shop, now. Numerical control and its varieties (local system supervizyrne

upravlinnya, direct numerical control). The principle of the structure and composition of flexible manufacturing systems, flexible automated production modules (HVM), flexible automated production systems (HWC). Determining the structure and principle of automated systems. CAM - automated system management. CAD - computer-aided design. ATCC - automated transport and storage system. DCS - automated process control system. Robotics and automation of production based on computer technology - the basis of the intensification of production. Features of robotics and automation of production tractor. Health and safety at work on automated equipment. The role of the human factor in automated manufacturing. The prospect of computer technology and automation and zastuvannya in their tractor.

1. Perehealing thatmtand forilkist godesCategories dystsypLina «Information Technology. "

Num	TEMA	Stakekist hours	
		toof this	of them laboratorno-practical work
1.	In more and Computer Technology dll industrial automation	12	-
2.	Systems ExerciseavlinnI Categoriesand Computer Technology	5	aboutCHPeninsula 4
	In thethese things:	17	4

The second topic "management systems based on computer technology", the following question. The concept of microprocessors, controllers and logic elements. Element basis of modern computers. Requirements for components for automated agricultural systems. Classification of communication devices in automated control systems on the basis of the action: data rate, type of signal. The use of devices and communication lines in agriculture. Sensors and their definitions. Static characteristics of the sensor and its sensitivity. Classification by type sensor input electric sizes: mechanical, thermal, optical. Sensors for displacement, pressure, temperature and frequency.

PEid conducting laboratory practical work is done:

1. Removing the static characteristics of the sensor.

2. Youteaching characteristics of sensors used in the profession tractor-driver of agricultural production.

Conclusion. Performancesanalysis software and teaching tools, uO used in agricultural education, reduced the topics of laboratory and practical work on the subject "Information Technology" shows that this training program performs insufficient general and developmental functions in preparing the tractor-driver of agricultural production and not consistent with the role and value of information technology society today. In this regard, it needs improvement toward expanding the use of basic information technology and increasing the number of hours in their study.

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In this article Flag prohrammnыh analysis dydaktycheskyh funds USED IN AGRICULTURAL education. Rassmotrenы aspects kommunykatsyonnoy Information and Preparation traktorystov-mashynystov agricultural production.

Andnformatsyonno-kommunykatsyonnыe technology, prohrammyruemыe dydaktycheskye materials, profession, tractor-mashynyst, Teaching program.

In analysis of didactic software programs, which are used in agrarian education and information and communication preparation of tractor driver-machinist, is executed in paper.

Information and communication technologies, programmable didactic materials, profession, tractor-driver, tutorials.

UDC 621.50

AnalogFrom the optimal traffic control cable crane direct variational method

VS Loveykin, PhD YA Romasevych, Ph.D.

In the paper the formulation of the problem of optimal control movement of the crane lifting cargo on a flexible suspension. Showing inability to use variational method for solving the problem. Based on the direct variational method Approximate solution of the problem. The influence of the number of additional boundary conditions on the value of the optimization criterion. A exponent "Bleezkosti "criterion value to its minimum value.

Pryamyy variational method, optimal control, crane, nonlinear regression.

Resolutionska problem. One problem operating cranes with flexible suspension load is a load fluctuations that occur during transient states of the crane.